[016] The problem on which this invention is based is to provide a hydrodynamic converter in which the pump is detachably connectable via a primary clutch with the ~~input of~~ output from the engine.

[032] In Fig. 1 is shown a hydrodynamic converter 1 comprising one pump 2, one turbine 3 connected with the transmission input shaft 4 and one stator (guide wheel) 5. Also shown are the ~~input 6 of~~ output 6 from the engine and the converter shell 7. The converter 1 comprised one lock-up clutch WK placed on the engine side and detachably connecting the input 6 with the transmission or the transmission input shaft 4. According to the invention, the primary clutch PK is not situated in the converter, but in the transmission G and connects the ~~input of~~ output 6 from the engine via the converter shell 7 with the hub 8 of the pump 2.

[035] According to the invention, grooves 17 are provided in the friction lining which convey the oil outwardly where it is collected in the deep interstices of the spline. The oil is inwardly guided into radial grooves in the end disc and the inner disc carrier and then can flow axially to the converter into the gap between pump hub 8 and converter shell 7. In addition, the oil can flow via holes in the gap between pump hub 8 and stator 9 in the converter. The primary clutch is closed under pressurization, the closing pressure of the transmission system being superposed on the converter inner pressure.

[036] Within the scope of the embodiment shown in Fig. 3, the primary clutch PK is designed as negative clutch; it is closed with spring force 12 and opened with pressure, it being independent of the inner pressure of the converter (up to the surface of the pressure bolts). To control said primary clutch, the pressure can be regulated "black-white" or via a pressure ramp independently of the converter pressure.

[040] In Fig. 6 is, likewise, shown a primary clutch PK actuatable via the converter pressure and closed by means of the force of a spring 12. By lowering the pressure behind the piston 11 the converter pressure pushes the piston against the spring [[11]] 12 and opens the clutch.

17. (CURRENTLY AMENDED) A hydrodynamic converter for a power train of a motor vehicle comprising one pump (2), one turbine (3) connected with a transmission input shaft (4) and one stator ~~(guide wheel)~~ (5), ~~in which~~ and said pump (2) [[is]] being detachably connectable, via a primary clutch (PK), with an [[input]] output (6) [[of]] from an engine[[, ]];

wherein said primary clutch (PK) is situated in the transmission (G);

converter oil flows through said primary clutch (PK) and said primary clutch (PK) is actuatable by converter pressure; and

said primary clutch (PK) is engaged by a spring (12), and a piston (11) of said primary clutch (PK is movable by the converter pressure, against a bias of said spring (12), so that said primary clutch (PK) disengages.

18. (CURRENTLY AMENDED) The hydrodynamic converter according to claim 17, wherein said primary clutch (PK) connects, via a converter shell (7), the [[input (6) of]] output (6) from said engine with a hub (8) of said pump (2) ~~via a converter shell (7)~~.

19. (PREVIOUSLY PRESENTED) The hydrodynamic converter according to claim 17, wherein an outer disc carrier of said primary clutch (PK) is connected with a converter shell (7) and an inner carrier of said primary clutch (PK) is connected with a pump hub (8).

20. (CURRENTLY AMENDED) The hydrodynamic converter according to claim 17, wherein said ~~primary clutch (PK) is sealed relative to oil of said converter (1), is lubricated and cooled by transmission oil and is closed with transmission system pressure, the~~ pressure being regulated by one of with or without a pressure ramp independently of the converter pressure.

21. (CANCELED)

22. (CURRENTLY AMENDED) The hydrodynamic converter according to claim 21, wherein a gap between a pump hub (8) and a guide wheel shaft (9) is sealed so that the oil can be fed to an inner disc carrier of said primary clutch (PK), and said inner disc carrier ~~having~~ has apertures (10) ~~in a manner~~ such that the oil arrives at discs by passing through said apertures (10), grooves [[being]] are provided in a friction lining which outwardly convey the oil, and the oil ~~flowing~~ flows axially to said converter (1) [[into]] through the gap between the pump hub (8) and a converter shell (7) and via holes in the gap between the pump hub (8) and the guide wheel shaft (9).

23. (CURRENTLY AMENDED) The hydrodynamic converter according to claim 17, wherein ~~said primary clutch (PK) can be closed with a spring force and~~

~~opened with pressure,~~ said pressure ~~being~~ for disengaging said primary clutch (PK) is regulatable with or without a pressure ramp.

24. (CURRENTLY AMENDED) The hydrodynamic converter according to claim 23, wherein said primary clutch (PK) has a baffle plate (16) ~~so as to achieve~~ which facilitates a rotation-pressure compensation.

25. (CANCELED)

26. (CURRENTLY AMENDED) The hydrodynamic converter according to claim [[25]] 17, wherein said primary clutch (PK) can be ~~closed~~ engaged by ~~lowering~~ reducing the pressure ~~behind a~~ acting on the piston (11) of said primary clutch (PK).

27. (CANCELED)

28. (CURRENTLY AMENDED) The hydrodynamic converter according claim 21, wherein for exact regulation of torque of said primary clutch (PK), [[a]] the converter pressure can be measured for determining a clutch actuation pressure via a return of the pressure to [[the]] a control valve or by ~~means of~~ a pressure sensor.

29. (CURRENTLY AMENDED) The hydrodynamic converter according to claim 17, wherein a toothing, mounted upon [[the]] an outer border of said primary clutch (PK), can be used for driving at least one of an accessory unit[[s]], a PTO's direct engine-driven gear[[s]] and to caliper [[the]] an engine rotational speed.

30. (CURRENTLY AMENDED) The hydrodynamic converter according to claim 17, wherein said primary clutch comprises [[one]] a pressure sensor (14) for detecting at least one of a piston pressure and [[one]] a rotational speed sensor (15) for detecting the pump rotational speed.

31. (CURRENTLY AMENDED) The hydrodynamic converter according to claim 17, wherein the hydrodynamic converter further ~~comprising one~~ comprises a converter lock-up clutch (WK).

32. (PREVIOUSLY PRESENTED) The hydrodynamic converter according to claim 17, wherein said primary clutch is mounted in said transmission (G) ~~so that a converter can be subsequently inserted~~ to facilitate coupling of the hydrodynamic converter to the transmission (G).

33. (NEW) A hydrodynamic converter for a power train of a motor vehicle comprising a pump (2), a turbine (3) connected with a transmission input shaft (4) and a stator (5), and the pump (2) is detachably connectable, via a primary clutch (PK), with an output (6) from an engine;

wherein the primary clutch (PK) is situated in the transmission (G); and

the primary clutch (PK) is engaged by a spring (12), and a piston (11) of the primary clutch (PK) is movable by converter pressure, against a bias of the spring (12), for disengaging the primary clutch (PK).

34. (NEW) The hydrodynamic converter according to claim 33, wherein a toothing, mounted upon an outer periphery of the primary clutch (PK), is available for driving at least one of an accessory unit, a PTO's direct engine-driven gear and to caliper an engine rotational speed.

35. (NEW) The hydrodynamic converter according to claim 33, wherein the primary clutch comprises a pressure sensor (14) for detecting at least one of a piston pressure and a rotational speed sensor (15) for detecting the pump rotational speed.

36. (NEW) The hydrodynamic converter according to claim 33, wherein the hydrodynamic converter further comprises a converter lock-up clutch (WK).

37. (NEW) The hydrodynamic converter according to claim 33, wherein the primary clutch is mounted in the transmission (G) to facilitate coupling of the hydrodynamic converter to the transmission (G).

38. (NEW) The hydrodynamic converter according to claim 33, wherein the primary clutch (PK) connects, via a converter shell (7), the output (6) from the engine with a hub (8) of the pump (2).

39. (NEW) The hydrodynamic converter according to claim 33, wherein an outer disc carrier of the primary clutch (PK) is connected with a converter shell (7) and an inner carrier of the primary clutch (PK) is connected with a pump hub (8).

40. (NEW) The hydrodynamic converter according to claim 33, wherein a gap between a pump hub (8) and a guide wheel shaft (9) is sealed so that the oil can be fed to an inner disc carrier of the primary clutch (PK), and the inner disc carrier has apertures (10) such that the oil arrives at discs by passing through the apertures (10), grooves are provided in a friction lining which outwardly convey the oil, and the oil flows axially to the converter (1) through the gap between the pump hub (8) and a converter shell (7) and via holes in the gap between the pump hub (8) and the guide wheel shaft (9).